

ABREVIATION

AB	ANCHOR BOLT	FL	FLOOR	SHT	SHEET
ABV	ABOVE	FS	FAR SIDE	SIM	SIMILAR
ADDL	ADDITIONAL	FDN	FOUNDATION	SPEC	SPECIFICATION
ALT	ALTERNATE	FOC	FACE OF CONCRETE	SO	SQUARE
ARCH	ARCHITECT,ARCHITECTURAL	FOS	FACE OF STUD	STD	STANDARD
BTWN	BETWEEN	FT	FOOT, FEET	STL	STEEL
BLW	BELOW	FTG	FOOTING	STRUCT	STRUCTURAL
BLDG	BUILDING	GA	GAGE	SYM	SYMMETRICAL
BLKG	BLOCKING	GALV	GALVANIZED	THK	THICK
BM	BEAM	GND	GROUND	T&B	TOP & BOTTOM
BN	BOUNDARY NAILING	GR	GRADE	TOF	TOP OF FOOTING
BOT	BOTTOM	HT	HEIGHT	TL	TOP OF LEDGER
BS	BOTH SIDES	HORIZ	HORIZONTAL	TOS	TOP OF STEEL
BSMT	BASEMENT	HS	HIGH STRENGTH	TRANSV	TRANSVERSE
CLR	CLEAR	INFO	INFORMATION	TS	TUBE STEEL
CLG	CEILING	INT	INTERIOR	TYP	TYPICAL
CMU	CONCRETE MASONRY UNITS	KP	KING POST	UNO	UNLESS NOTED OTHERWISE
COL	COLUMN	KSI	KIPS PER SQ INCH	VERT	VERTICAL
CONC	CONCRETE	LBS	POUNDS	WF	WIDE FLANGE BEAM
CONN	CONNECTION	LG	LONG	W/	WITH
CONST	CONSTRUCTION	LONGIT	LONGITUDINAL	W/O	WITHOUT
CONT	CONTINUOUS	LT WT	LIGHT WEIGHT	WP	WATERPROOFING
CONTR	CONTRACTOR	MAX	MAXIMUM	WWF	WELDED WIRE FABRIC
CF	CUBIC FOOT	MB	MACHINE BOLT	WT	WEIGHT
CJ	CONST. JOINT	MD	METAL DECK	WP	WORKING POINT
CVR	COVER	MECH	MECHANICAL		
DIA	DIAMETER	MFR	MANUFACTURER		
DIR	DIRECTION	MIN	MINIMUM		
DWG	DRAWING	MISC	MISCELLANEOUS		
EA	EACH	NS	NEAR SIDE, NELSON STUD		
EF	EACH FACE	NW	NORMAL WEIGHT		
ELEC	ELECTRICAL	OC	ON CENTER		
EL	ELEVATION	OPP	OPPOSITE		
EN	EDGE NAILING	PSF	POUNDS PER SQ FOOT		
ENGR	ENGINEER	PSI	POUNDS PER SQ INCH		
EXP JT	EXPANSION JOINT	REINF	REINFORCEMENT		
EQ	EQUAL	REQ	REQUIRE		
EXT	EXTERIOR	SCHED	SCHEDULE		
FF	FINISHED FLOOR	SF	SQUARE FOOT		
FG	FINISHED GRADE				
FN	FIELD NAILING				

STRUCTURAL OBSERVATIONS

1. STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCRURAL SYSTEM IN ACCORDANCE WITH MGD 110. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.
2. THE OWNER SHALL EMPLOY A CIVIL OR STRUCTURAL ENGINEER OR ARCHITECT TO PERFORM THE STRUCTURAL OBSERVATION. THE ENGINEER OR ARCHITECT SHALL BE REGISTERED OR LICENSED IN THE STATE OF CALIFORNIA. THE DEPARTMENT OF BUILDING & SAFETY RECOMMENDS THE USE OF THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN WHEN THEY ARE INDEPENDENT OF THE CONTACTOR. THE STRUCTURAL OBSERVER SHALL PROVIDE EVIDENCE OF EMPLOYMENT BY THE OWNER, A LETTER FROM THE OWNER OR A COPY OF THE AGREEMENT FOR SERVICES SHALL BE SENT TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT. THE STRUCTURAL OBSERVER SHALL ALSO INFORM THE OWNER OF THE REQUIREMENTS FOR A PRE-CONSTRUCTION MEETING AND SHALL PRESIDE OVER THAT MEETING.
4. THE OWNER OR OWNER'S REPRESENTATIVE SHALL COORDINATE AND CALL FOR A MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS AND DEPUTY INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT AND SUBMITTED TO THE BUILDING INSPECTOR.
5. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STAGES IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL ENGINEER.
- | CONSTRUCTION STAGES | ELEMENTS/CONNECTIONS TO BE OBSERVED |
|---------------------|-------------------------------------|
| a). CONC.: | REBAR PLACEMENT |
6. THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT ON THE DEPARTMENT FORM B&S 261 FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED. THE ORIGINAL OF THE OBSERVATION REPORT SHALL BE SENT TO THE BUILDING INSPECTOR'S OFFICE AND SHALL BE SIGNED AND SEALED (WET STAMPED) BY THE RESPONSIBLE STRUCTURAL OBSERVER. ONE COPY OF THE OBSERVATION REPORT SHALL BE ATTACHED TO THE APPROVED PLANS. COPIES OF THE REPORT SHALL ALSO BE GIVEN TO THE OWNER, CONTRACTOR AND DEPUTY INSPECTOR.
7. A FINAL OBSERVATION REPORT MUST BE SUBMITTED WHICH SHOWS THAT ALL OBSERVED DEFICIENCIES WERE RESOLVED AND THE STRUCTURAL SYSTEM GENERALLY CONFORMS WITH THE APPROVED PLANS AND SPECIFICATIONS. THE DEPARTMENT OF BUILDING AND SAFETY WILL NOT ACCEPT STRUCTURAL WORK WITHOUT THIS FINAL OBSERVATION REPORT AND THE CORRECTION OF SPECIFIC DEFICIENCIES NOTED DURING NORMAL BUILDING AND DEPUTY INSPECTION.
8. THE STRUCTURAL OBSERVER SHALL SEND THE ORIGINAL OBSERVATION REPORT TO THE FOLLOWING INSPECTION OFFICE:
INSPECTION GROUP NAME LI AND ASSOC., INC.
STREET ADDRESS 77 ROLLING OAKS DR. #203
COMMUNITY OF LA. CA. ZIP CODE THOUSAND OAKS, CA. 91361
9. WHEN THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:
a) NOTIFY THE BUILDING INSPECTOR IN WRITING BEFORE THE NEXT MINIMUM;
b) CALL AN ADDITIONAL PRE-CONSTRUCTION MEETING AND
c) FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF ALL PREVIOUS OBSERVATION REPORTS.
- THE REPLACEMENT STRUCTURAL OBSERVER SHALL APPROVE THE CORRECTION OF THE ORIGINAL OBSERVED DEFICIENCIES UNLESS OTHERWISE APPROVED BY PLAN CHECK SUPERVISION. THE POLICY OF THE DEPARTMENT SHALL BE TO CORRECT ANY PROPERLY NOTED DEFICIENCIES WITHOUT CONSIDERATION OF THEIR SOURCE.
10. THE ENGINEER OR ARCHITECT OF RECORD SHALL DEVELOPE ALL CHANGES RELATING TO THE STRUCTURAL SYSTEMS. THE BUILDING DEPARTMENT SHALL REVIEW AND APPROVE ALL CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS.

SYMBOLS

~<	ANGLE
@	AT
~C	CENTERLINE
~P	PLATE
#	NUMBER
Ø	DIAMETER
PL	PROPERTY LINE

CONCRETE:

1. CONCRETE MIXES SHALL BE DESIGNED BY A RECOGNIZED TESTING LABORATORY AND COPIES OF THE DESIGN SHALL BE SENT TO THE ARCHITECT AND THE ENGINEER. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE ARCHITECT. ALL CONCRETE EXCEPT FOUNDATION CONCRETE SHALL CONTAIN POLYMER BASED WATER REDUCING ADMIXTURE.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150. TYPE II AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C-33. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM ASTM C-330.
3. ALL REINFORCING BARS, ANCHOR BOLTS, PRESTRESSING TENDONS, AND ALL OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
4. THE MAXIMUM SLUMP SHALL NOT EXCEED 4"+/- 1" FOR FOOTINGS, SLABS ON EARTH, AND MASS CONCRETE, AND 5" +/- 1" FOR OTHER CONCRETE.
5. MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS: (MINIMUM 5 SACKS OF CEMENT PER CUBIC YARD)(MAXIMUM WATER/CEMENT RATIO TO BE 7.5 GAL WATER/SACK OF CEMENT).
A. SLABS ON EARTH, SIDEWALK, CURBS ETC.....3000 P.S.I.
B. FOUNDATIONS.....3000 P.S.I.
6. ALL STRUCTURAL CONCRETE IS TO BE REINFORCED.
7. CONTRACTOR SHALL SUBMIT SLAB CONSTRUCTION JOINT LAYOUT DRAWINGS TO THE ARCHITECT AND ENGINEER FOR REVIEW.
8. PROJECTING CORNERS OF BEAMS, COLUMNS, WALLS, ETC. SHALL BE FORMED WITH A 3/4" CHAMPHER UNLESS DETAILED OTHERWISE.
9. THERE SHALL BE NO FLY ASH IN THE CONCRETE MIX FOR SLABS, CONCRETE WALLS, AND COLUMNS THAT ARE VISUALLY EXPOSED.
10. PROJECTING CORNERS OF BEAMS, COLUMNS, WALLS, ETC. SHALL BE FORMED WITH A 3/4" CHAMPHER UNLESS DETAILED OTHERWISE.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60 FOR NO.5 AND LARGER, ASTM A-615 GRADE 40 FOR NO.4 AND SMALLER.
2. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS:
A. CONCRETE POURED DIRECTLY AGAINST EARTH, 3" CLEAR.
B. STRUCTURAL SLAB, 3/4" CLEAR TOP AND BOTTOM UNLESS NOTED OTHERWISE.
C. CONCRETE FORMED AGAINST EARTH OR EXPOSED TO WEATHER, 1-1/2" CLEAR (2" CLEAR FOR 6 BARS AND LARGER).
D. INTERIOR BEAMS AND COLUMNS, 1-1/2" CLEAR TO FACE OF STIRRUP.
3. WIRE MESH SHALL CONFORM TO ASTM A-185, AND SHALL BE LAPPED 1-1/2" SPACES OR 12" MINIMUM.
4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
5. REINFORCING STEEL SHALL BE SPLICED WITH CLASS B SPLICES UNLESS NOTED OTHERWISE ON THE DRAWINGS.
6. CONTRACTOR SHALL NOT PLACE ANY REINFORCING UNTIL APPROVED SHOP DRAWINGS ARE RECEIVED ON THE JOB.
7. LOW HYDROGEN ELECTRODES SHALL BE USED WHEREVER REINFORCING STEEL IS WELDED.

MASONRY:

1. BLOCK MASONRY UNITS SHALL BE SINGLE OR DOUBLE OPEN END BOND BEAM UNITS, GRADE "N" CONFORMING TO ASTM C-90 AND U.B.C. STANDARD 21-4, LATEST REVISION. MINIMUM ULTIMATE STRENGTH OF MASONRY SHALL BE 1500 PSI @ 28" C/C DAYS.
2. GROUT FOR THE BLOCK UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. MORTAR SHALL BE U.B.C. TYPE "S" AS DEFINED IN TABLE 21-B OF U.B.C. 1997 EDITION AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
3. SEE "REINFORCING STEEL" SECTION OF GENERAL NOTES FOR ASTM SPECIFICATIONS OF REINFORCING STEEL.
4. MINIMUM LAP OF REINFORCING STEEL SHALL BE 48 BAR DIAMETERS OR A MINIMUM OF 2'-0".
5. GROUTING PROCEDURE FOR LIFTS EXCEEDING FIVE FEET: PROVIDE CLEAN-OUT OPENINGS AT THE BOTTOM OF THE LIFT IN EVERY CELL TO BE FILLED. LIFT IS NOT TO EXCEED 8'-0".
6. MINIMUM GROUTING: GROUT ALL REINFORCED CELLS. SOLID GROUT ALL CELLS WHERE NOTED. SOLID GROUT ALL CELLS BELOW GRADE.
7. VERTICAL EXPANSION JOINTS SHALL BE PROVIDED AT 40'-0" o/c MAXIMUM.
8. CONTINUOUS INSPECTION OF WORK INVOLVING MASONRY IS NOT REQUIRED PER SECTION 1701, VOL.II OF THE 1997 EDITION OF THE U.B.C. UNLESS OTHERWISE ON THE DRAWINGS.
9. ALL BOLTS SHALL BE GROUTED INPLACE WITH AT LEAST 1 INCH OF GROUT BETWEEN THE BOLT AND THE MASONRY.

GENERAL STRUCTURAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS AT THE JOBSITE PRIOR TO STARTING CONSTRUCTION AND THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTANCIES.
2. ALL PHASES OF WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 1997 UNIFORM BUILDING CODE.
3. THE CONTRACT CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, ALL SHORING, FORMS, AND SCAFFOLDING.
4. OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN SLABS, BEAMS, COLUMNS, WALLS, ETC., UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
5. ALL ASTM SPECIFICATIONS NOTED ON THESE DRAWINGS SHALL BE OF THE LATEST REVISION.
6. CONTINUOUS INSPECTION BY A REGISTERED DEPUTY INSPECTOR APPROVED BY THE ARCHITECT AND/OR ENGINEER AND THE BUILDING DEPARTMENT SHALL BE EMPLOYED BY THE CONTRACTOR FOR THE FOLLOWING TYPES OF WORK:
A. ALL CONCRETE WORK ABOVE GRADE INVOLVING CONCRETE STRENGTH GREATER THAN 2000 P.S.I.
B. FOUNDATION CONCRETE INVOLVING CONCRETE STRENGTH GREATER THAN 2500 P.S.I.
C. SEE MASONRY SECTION FOR ADDITIONAL REQUIREMENTS.
D. SEE U.B.C. SECTION 1701, VOL.II FOR ADDITIONAL REQUIREMENTS.
7. IN THE EVENT THAT CERTAIN FEATURES OF CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE NOTES OR SPECIFICATIONS, NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY & WAIT FOR INSTRUCTIONS.
8. COST OF ADDITIONAL DESIGN WORK CESSITATED BY SELECTION OF AN OPTION OR DUE TO ERRORS OR OMISSIONS IN CONSTRUCTION, SHALL BE BORNE BY THE CONTRACTOR.
11. WHERE SOIL REPORT IS CITED, ITS REQUIREMENTS ADOPTED HEREIN.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON THE SOIL INVESTIGATION REPORT BY: NEBLET & ASSOCIATES, INC.
HUNTINGTON BEACH, CA
PROJECT NO.: 147-002-07
DATE: JUNE 25, 2001
2. DESIGN SOIL BEARING PRESSURE IS 2000PSF @ 18" MIN. BELOW GRADE. (ASSUMED)
3. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPT. FOUNDATION INSPECTION, THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL, IN WRITING, THAT:
A. THE BUILDING PAD WAS PREPARED ACCORDING TO THE SOILS REPORT.
B. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.
C. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED.



PF512991



LI & ASSOCIATES, INC.
STRUCTURAL ENGINEERS

77 ROLLING OAKS DR. NO. 203
THOUSAND OAKS, CA. 91361
PHONE (805) 495-3432
FAX (805) 495-4083

REVIEWED LAND DEVELOPMENT DIVISION

BY B. H. A. DATE 12/2/02
SUBDIVISION PLAN CHECKING SECTION

NO.	REVISION	REVISED BY	APPROVED BY	DATE



PROJECT ENGINEER

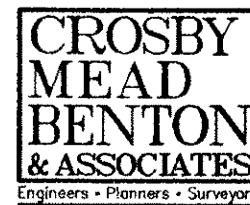
DATE

DWG

STORM DRAIN PLANS IN
D.S. NO. 508 P.D. No. 2530

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

PREPARED BY:



6345 Balboa Blvd. Suite 140
Encino, California 91316
(818) 343-5384

SHEET 9 OF 12